

## DATA ANALYST 1-4 SERIES

### CLASS DESCRIPTION

#### General Responsibilities:

This is responsible professional data analytics work supporting the City's performance excellence goals and outcome-based budgeting. These positions will use data to provide innovative solutions to complex problems in relation to City-wide or agency plans, goals, strategies and operational effectiveness. Incumbents may work within the Finance Department as part of the City's Data Analytics Team, or within specific agencies, supporting agency data needs. Incumbents will work under the general supervision of the Budget and Program Evaluation Manager or an agency manager, and leadership of the Data Projects Coordinator (Data Analyst 4), and will exercise independent judgment and discretion in carrying out assigned projects.

Within the Finance Department, this series is structured to provide advancement from a Data Analyst 1 to Data Analyst 2, and from a Data Analyst 2 to a 3, as a function of the employee's career development. Movement to each level will generally take at least 2 years and is dependent on the incumbent taking on additional duties and responsibilities with a higher degree of judgment, independence, and discretion. Movement to the Data Analyst 4 level is position specific and would normally be accomplished through competition.

At the agency level, this series is expected to progress from a Data Analyst 1 to Data Analyst 2, and from a Data Analyst 2 to a 3, as a function of the employee's career development. However, it is not anticipated that a Data Analyst in an agency will advance to the Data Analyst 4 level as the agency Data Analyst will not have overall responsibility for city-wide Data functions.

#### *Data Analyst 1*

This is the entry level of the Data Analyst career progression series. This work is characterized by more structured and/or closely reviewed professional assignments, necessitating application of data analytic theories and concepts. Work may include varied areas of data analytics (e.g., data action plans, automating reports, processing big data sets, data visualization, providing business analysis and building data collection and intelligence tools). However, employees will work under limited supervision, and are expected to exercise professional judgment and discretion within clearly defined parameters.

#### *Data Analyst 2*

This is the objective level of the Data Analyst career progression series both within the Finance Department and at the agency level. Employees complete diverse data analytic assignments; prepare comprehensive reports and recommendations; present and defend findings; and exercise fully developed professional skills. Under general supervision, employees are expected to independently exercise professional judgment and discretion.

### *Data Analyst 3*

This is journey-level professional work in the development and implementation of assigned data analytic programs, functions and services. Work is characterized by considerable judgment, discretion and expertise in the preparation and presentation of complex analysis, and the administration of programs and services, as assigned. Under general supervision, employees work with a high degree of independence in meeting specified objectives.

### *Data Analyst 4*

This is the advanced, leadership level of the professional Data Analyst series within the Finance Department. Employees at this level are consistently assigned to projects with major financial and policy-level implications, incorporating complex long-term planning considerations, and the coordination of inter-agency group efforts. Work is performed with considerable independence in areas where there are often not clear policy/procedural parameters. Work includes providing leadership, advice and consultation to Data Analysts within the Finance Department and those working within agencies. Work is performed under the general supervision of the Budget and Program Evaluation Manager.

### Examples of Duties and Responsibilities:

#### *Data Analyst 1*

Work with a portfolio of agencies to execute data action plans. Work with agencies to develop specifications to automate reports and process big data sets. Build and maintain data visualizations using business intelligence tools. Analyze large longitudinal data sets. Build data collection and analysis tools to assist agencies with incorporating data collection and management into existing business processes. Produce summary performance reports highlighting insights gained from data. Present key findings to City leadership

Support Madison's Open Data Program through maintaining the City's dataset inventory. Build tools and processes to maintain and update the City's dataset inventory. Work with agencies to implement publishing plans to regularly publish datasets to the City's Open Data portal. Automate reports and process big data sets using computer-programming software. Visualize data using business intelligence tools. Contribute to the ongoing efforts of the Data Management Team.

Prepare content for data analysis trainings for City staff. Stay current on emerging trends in the application of data science tools to improve government service delivery.

Collect and analyze data for citywide indicators. Research and draft recommendations for projects as part of the city's annual research agenda. Participate in identifying and scoping research projects carried out through a data partnership with University partners.

Perform related work as assigned.

#### *Data Analyst 2*

Perform the work of a Data Analyst 1, with a higher degree of professional complexity; initiative; judgment and discretion; and personal accountability in the preparation, presentation and justification of recommendations.

Conduct or participate in varied and complex management analysis, program evaluations and special studies regarding departmental operations, performance excellence, information requests, and general City data analysis.

Facilitate Data Trainings. Develop content aimed at improving organizational capacity and competencies to work with data for a variety of audiences. Work with agencies to conduct individualized trainings to improve data analysis capacity and data collection practices. Provide expertise and advice on a wide variety of related management activities and initiatives.

Perform related work as assigned.

### *Data Analyst 3*

Perform the work of a Data Analyst 2 with a greater degree of complexity, independence, discretion, and judgment.

Make and defend substantive recommendations on the implications of the data found for City services. Prepare draft and/or final recommendations for incorporating diverse factors.

Perform related work as assigned.

### *Data Analyst 4*

Perform all the work consistent with the class of a Data Analyst 3 with a greater degree of complexity, independence, discretion, and judgment within the Finance Department.

Conduct or participate in varied and highly complex multi-faceted management audits, program evaluations and special studies regarding major policy initiatives incorporating long-term planning considerations, departmental operations, performance excellence, information requests, and general City data analyses.

Serve as liaison between the Finance Department and City agencies regarding high level administrative, data, and/or major issues.

Lead data collection efforts for the City. Oversee and develop standards for city-wide data collection efforts. Serve as leadworker for Data Analysts within the Finance Department and at various agencies.

Perform related work as required.

## QUALIFICATIONS

### **Training and Experience:**

Generally, positions in this classification will require:

#### *Data Analyst 1*

Graduation from an accredited college or university with a Bachelor's Degree in business analytics, computer science, data science, math, statistics, economics, public administration, public policy or a related field. Other combinations of training and/or experience which can be demonstrated to result in the possession of the knowledge, skills and abilities necessary to perform the duties of this position will also be considered.

#### *Data Analyst 2*

Two years of professional data collection, analytics, and management experience. Such experience would normally be gained after graduation from an accredited college or university with a Bachelor's Degree in business analytics, computer science, data science, math, statistics, economics, public administration, public policy or a related field. Other combinations of training and/or experience which can be demonstrated to result in the possession of the knowledge, skills and abilities necessary to perform the duties of this position will also be considered.

#### *Data Analyst 3*

Four years of professional data collection, analytics, and management experience. Such experience would normally be gained after graduation from an accredited college or university with a Bachelor's Degree in business analytics, computer science, data science, math, statistics, economics, public administration, public policy or a related field. Other combinations of training and/or experience which can be demonstrated to result in the possession of the knowledge, skills and abilities necessary to perform the duties of this position will also be considered.

#### *Data Analyst 4*

Four years of professional data collection, analytics, and management experience, including or supplemented by leadership experience. Such experience would normally be gained after graduation from an accredited college or university with a Bachelor's Degree in business analytics, computer science, data science, math, statistics, economics, public administration, public policy or a related field. Other combinations of training and/or experience which can be demonstrated to result in the possession of the knowledge, skills and abilities necessary to perform the duties of this position will also be considered.

Specific training and experience requirements will be established at the time of recruitment.

### **Knowledge, Skills and Abilities:**

#### *Data Analyst 1*

Working knowledge of the principles of data analysis, administration and management. Working knowledge of and ability to use computer software applicable to the duties of the position. Knowledge of data governance, data quality, data security principles and best practices. Knowledge of computer-assisted data analysis techniques. Ability to evaluate the effectiveness of work programs. Ability to conduct interviews, collect and evaluate data, and compile related financial, statistical and narrative reports and recommendations. Ability to independently prepare, present, and defend analytic findings. Ability to develop and maintain effective working relationships with a wide variety of City and external business contacts. Ability to work effectively with multi-cultural populations. Ability to perform accurate calculations. Ability to communicate effectively both orally and in writing. Ability to attend meetings outside the regular work schedule, including evenings. Ability to maintain adequate attendance.

#### *Data Analyst 2*

Thorough knowledge of the principles of data administration and management. Thorough knowledge of and ability to use computer software applicable to the duties of the position. Working knowledge of data governance, data quality, data security principles and best practices. Working knowledge of computer-assisted data analysis techniques. Ability to evaluate the effectiveness of work programs. Ability to conduct interviews, collect and evaluate data, and compile related financial, statistical and narrative reports and recommendations. Ability to independently prepare, present, and defend analytic findings. Ability to develop and maintain effective working relationships with a wide variety of City and external business contacts. Ability to work effectively with multi-cultural populations. Ability to perform accurate calculations. Ability to communicate effectively both orally and in writing. Ability to attend meetings outside the regular work schedule, including evenings. Ability to maintain adequate attendance.

#### *Data Analyst 3*

Thorough knowledge of the principles of data administration and management. Thorough knowledge of and ability to use computer software applicable to the duties of the position. Thorough knowledge of data governance, data quality, data security principles and best practices. Thorough knowledge of computer-assisted data analysis techniques. Ability to evaluate the effectiveness of work programs. Ability to conduct interviews, collect and evaluate data, and compile related financial, statistical and narrative reports and recommendations. Ability to independently prepare, present, and defend analytic findings. Ability to develop and maintain effective working relationships with a wide variety of City and external business contacts. Ability to work effectively with multi-cultural populations. Ability to perform accurate calculations. Ability to communicate effectively both orally and in writing. Ability to attend meetings outside the regular work schedule, including evenings. Ability to maintain adequate attendance.

#### *Data Analyst 4*

Thorough knowledge of the principles of data administration and management. Thorough knowledge of and ability to use computer software applicable to the duties of the position. Thorough knowledge of data governance, data quality, data security principles and best

practices. Thorough knowledge of computer-assisted data analysis techniques. Knowledge of effective leadership strategies and techniques. Ability to lead a team of professionals, including those located throughout various City agencies. Ability to develop and implement strategies regarding data collection and analysis. Ability to evaluate the effectiveness of work programs. Ability to conduct interviews, collect and evaluate data, and compile related financial, statistical and narrative reports and recommendations. Ability to independently prepare, present, and defend analytic findings. Ability to develop and maintain effective working relationships with a wide variety of City and external business contacts. Ability to work effectively with multi-cultural populations. Ability to perform accurate calculations. Ability to communicate effectively both orally and in writing. Ability to attend meetings outside the regular work schedule, including evenings. Ability to maintain adequate attendance.

Additional specific KSAs may be included based on the specific needs of a position.

Necessary Special Qualifications:

Ability to meet the transportation requirements of the position.

Incumbents in this position will be expected to attend meetings of the Common Council and related bodies as required to discuss issues related to the budget. This includes budget deliberation meetings that are scheduled on consecutive evenings usually in November.

**Physical Requirements:**

Work is primarily sedentary in nature and performed in an office environment. Employees will be expected to use standard office equipment such as a telephone, computer, calculator, copier, and fax machine.

<b>Department/Division</b>	<b>Classification</b>	<b>Comp. Group</b>	<b>Range</b>
Various	Data Analyst 1	18	06
Various	Data Analyst 2	18	08
Various	Data Analyst 3	18	10
Various	Data Analyst 4	18	12

Approved: \_\_\_\_\_  
 Harper Donahue IV  
 Human Resources Director  
 Date